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**DOCUMENT REVIEW: DRAFT FINAL; TECHNICAL MEMORANDUM NO. 3
ADDENDUM TO FINAL PHASE I RFI/RI WORK PLAN
SURFACE SOIL AND ASBESTOS DISPOSAL AREA; OPERABLE UNIT 7,
ROCKY FLATS PLANT, GOLDEN CO.**

(Note: This document was originally reviewed in January, 1993. The only comment that appears to have been addressed from that review was additional discussion regarding how the asbestos disposal areas were discovered. All other comments were not addressed.)

MAJOR CONCERNS

1. There is no rationale for conducting the sampling described in this memorandum. Two objectives are provided: 1) to characterize the surface soils at the landfill, and 2) to characterize the asbestos disposal areas. This information is supposedly required for the human health risk assessment; however, it is not clear why this information is required for the human health risk assessment. If the landfill is currently operating in accordance with 40 CFR 257, 40 CFR 61, and 40 CFR 763 and is closed in accordance with these requirements, assessing the human health risk of surface soils is not necessary because the surface will be modified, i.e. capped. Identification of the applicable requirements at the planning stages of an investigation is part of the Data Quality Objectives process, in this case the requirement of capping allows the surface soil portion of the investigation to be eliminated. The relationship between the final remedy or closure action that is required for particular types of waste disposal units, in this case a landfill, is a vital component towards streamlining an investigation so that only required information is collected. The human health risk assessment function is to be a component of the final decision process, when it is known that the applicable requirements require specific actions, the human health risk assessment process should be modified to supplement those requirements.
2. A case is not made how this effort is connected to the IAG activities. The landfill and its operation is not regulated under RCRA Subtitle C and is not a RCRA permitted facility. If the landfill is being operated in compliance with state law and the solid waste requirements, the placement of cover material is a function of the present operational procedures and therefore severed from past disposal practices. Resource Conservation and Recovery Act (RCRA) corrective actions investigated under 3004(u) are meant to be used to assess environmental insult from past activities. To include testing of the landfill cover material to determine the adequacy of the present practices might be considered exterior to IAG compliance. The addition of non-IAG work into the RFI/RI can negatively impact the schedule and is considered a growth in scope beyond what was originally intended or envisioned to be included in the IAG. This work growth would place an unnecessary regulatory burden on the State and DOE.
3. Sampling the surface soil by the method described in this memorandum would possibly be appropriate if the surface soil was potentially

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contaminated. The information provided in this memo and the Operable Unit 7 RFI/RI Work Plan clearly indicates that the surface soil material is cover material brought in from off the plant site. Since this is an active landfill, the surface soils of the landfill are constantly being changed. (A point discussed in this memo for not utilizing historical data, Section 2.1.2, p. 2, sixth paragraph). From the information provided the concern would appear to be the material transported in from off-site that is being used as soil cover material. If this is the case then it would seem more appropriate to sample the soil pile before it is used as cover rather than after; however, there does not seem to be any reason to even suspect that the cover material would be contaminated. If the cover material is in fact contaminated then a new source of cover material should be located.

4. The sample pattern provided appears very inappropriate for determining the impact of the asbestos disposal trenches on the environment. The issue would seem to be if the trenches had been breached and the potential existed for asbestos to be transported. If this is in fact the case then biased sampling where the disposal trenches are located would seem to be the best method to determine if there is a problem. The sampling should be focused in the area of the trenches as defined by the aerial photographs and consist only of asbestos, i.e. eliminate the rest of the analytical suite.

GENERAL COMMENTS

1. The use of residential lot size as a method for determining grid spacing is not appropriate at a RCRA landfill. RCRA closure requirements (and TSCA regulations on buried asbestos) are explicit with regards to employing institutional controls to control access. The RCRA closure requirements should be taken into consideration when developing the human health risk scenarios.
2. Given the nature of this site, a landfill that received RCRA wastes and is currently active, it would seem that closure would follow RCRA requirements. For this site installation of landfill cap that meets RCRA requirements would appear necessary. Given this requirement any surface soil sampling for human health risk assessment purposes in the landfill itself would be futile.

SPECIFIC COMMENTS

1. Section 1.0, p. 1: Please clarify the requirement for this sampling effort. The only technical requirement presented is to characterize the asbestos in surface soils, something which does not appear to be a problem.

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2. Section 2.1.2, p. 2, fifth and sixth paragraphs: These two paragraphs appear to suggest that the potential problem is the material that is being used as an interim soil cover. As is pointed out in paragraph six there is no reason to sample the current soil surface as it is going to be buried with the interim soil cover material. If the concern is that the interim material is contaminated it would seem to make more sense to sample the material when it is still in a pile than after it is spread across the site. Please clarify the rationale for this sampling, what is being sampled and why.
3. Section 2.2.3, p. 5, first paragraph: (a) The references to "toxicology applications" in the first two bullets and in the text following the bullets are obscure. What are toxicological applications? If the intended meaning is risk assessment, please say risk assessment. (b) The meaning of "data verification" in the text following the bullets is unclear. The intended meaning is probably data validation. Since the term data validation has a specific, well-defined meaning, the term data verification should not be substituted for it. (c) The statement that only Level IV and Level V data can be validated ("verified") and can be used in risk assessment ("toxicological interpretation") is incorrect. Level III data are also validated and are suitable for and routinely used in risk assessment. Requiring Level IV data will unnecessarily increase project costs. Recommend that data of Level III quality are sufficient.
4. Section 3.1.1, p. 7, second paragraph: The statement that the spatial trends are not expected is not true. If the asbestos was disposed in trenches then it is likely the asbestos is concentrated in the areas of the trenches.
5. Section 3.1.3, p. 8, fifth paragraph: The rationale for full suite analysis has not been presented. Please describe the need for full suite analysis.
6. Section 3.2, p. 9: Please clarify how the techniques will be chosen and how these methods will be documented.
7. Section 3.2, p. 9, fourth paragraph: Pushing Cone Penetrometers (CP) into a landfill may cause health and safety risks to workers that should be considered before pursuing such a project. It is, in addition, not clear that it is particularly useful to know the depths of the trenches any better than can be determined from aerial photos. Recommend that the CP work be deleted from the work plan.
8. Section 4.0, p. 10, second paragraph: Contrary to the second sentence, laboratory blanks and replicates are not collected in the field. Please correct this sentence.
9. Section 4.0, p. 10, third paragraph: Source blanks should be collected in addition to the QC samples specified here. Source blanks are samples from the water sources used in decontamination procedures that are taken

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to evaluate whether the source water may be introducing contamination into environmental samples. Source blanks are usually taken at a frequency of 1 per source (e.g tap water and deionized water) per event, or at least 1 per source every two weeks. Please discuss source blanks in the text and add to Table 2.

10. Section 4.0, p. 10, fourth paragraph and Table 2: Matrix spikes and matrix duplicates (MS/MSD) are collected in the field at a frequency of 1 in 20 and should be specified in the work plan. Please add these samples to Table 2.

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